

## CLAIMS

What is claimed is:

1 1. A method comprising:  
2 receiving a first identification (ID) at a computer system from a server via  
3 a transmission medium;  
4 comparing the first ID with a second ID stored at a first analog front end  
5 coupled to the computer system; and  
6 certifying a first software-defined radio for operation if the first ID  
7 matches the second ID.

1 2. The method of claim 1 further comprising disabling the first software-  
2 defined radio if the first ID does not match the second ID.

1 3. The method of claim 1 further comprising storing the first ID in a memory  
2 device within a baseband unit at the computer system prior to comparing the  
3 first ID with the second ID.

1 4. The method of claim 1 further comprising downloading a protocol  
2 corresponding with the first software-defined radio.

1 5. The method of claim 4 wherein the first ID and the wireless protocol are  
2 received as a component of a signed manifest.

1 6. The method of claim 5 further comprising:  
2 validating the signed manifest; and  
3 executing the protocol at a baseband unit if the manifest is validated.

1 7. The method of claim 1 further comprising:

2 receiving a third identification (ID) at the computer system from the  
3 server via the transmission medium;  
4 comparing the third ID with a fourth ID stored at a second analog front  
5 end coupled to the computer system; and  
6 certifying a second software-defined radio for operation if the third ID  
7 matches the fourth ID.

1 8. A computer system comprising a first software-defined radio including:  
2 a baseband unit; and  
3 a first analog front-end coupled to the baseband unit;  
4 the first software-defined radio being certified for operation by  
5 authenticating a first identification (ID) received at the baseband unit with a  
6 second ID stored at the first analog front end.

1 9. The computer system of claim 8 further comprising:  
2 an input/output (I/O) bus coupled to the baseband unit; and  
3 a network controller coupled to the I/O bus.

1 10. The computer system of claim 9 wherein the first ID is received from a  
2 server computer via a transmission medium coupled to the network controller.

1 11. The computer system of claim 10 wherein a protocol corresponding to the  
2 first software-defined radio is also received from the server computer.

1 12. The computer system of claim 9 wherein the baseband unit comprises:  
2 an I/O interface coupled to the I/O bus;  
3 a digital signal processor (DSP) coupled to the I/O interface; and  
4 a second bus coupled to the DSP.

1 13. The computer system of claim 12 wherein the baseband unit further

2 comprises:

3 a volatile memory coupled to the DSP; and

4 a non-volatile memory coupled to the DSP.

1 14. The computer system of claim 12 wherein the analog front end comprises:

2 analog-digital/digital-analog (AD/DA) conversion logic coupled to the

3 second bus;

4 modulation logic coupled to the AD/DA conversion logic;

5 a transceiver coupled to the modulation logic; and

6 an antenna coupled to the transceiver.

1 15. The computer system of claim 14 wherein the analog front end comprises

2 a non-volatile memory that stores the second ID.

1 16. The computer system of claim 12 further comprising a second software-

2 defined radio including:

3 the baseband unit; and

4 a second analog front-end coupled to the baseband unit;

5 the second software-defined radio being certified for operation by

6 authenticating a third ID received at the baseband unit with a fourth ID stored at

7 the second analog front end.

1 17. A network comprising:

2 a first client computer;

3 a transmission medium coupled to the first client computer; and

4 a server computer, coupled to the transmission medium, that transmits

5 first identification (ID) data to the first client computer upon receiving a request

6 from the client computer to certify a first software-defined radio implemented at

7 the first client computer.

1 18. The network of claim 17 further comprising a second client computer  
2 coupled to the transmission medium, the server computer transmits the first ID  
3 data to the second client computer upon receiving a request from the second  
4 client computer to certify the first software-defined radio implemented at the  
5 second client computer.

1 19. The network of claim 17 wherein the server computer transmits second ID  
2 data to the first client computer upon receiving a request from the first client  
3 computer to certify a second software-defined radio implemented at the first  
4 client computer.

1 20. A method comprising:  
2 receiving a request at a server computer to certify a first software-defined  
3 radio implemented at a first client computer; and  
4 transmitting first identification (ID) data corresponding to the first  
5 software-defined radio to the first client computer.

1 21. The method of claim 21 further comprising transmitting a radio protocol  
2 corresponding to first software-defined radio to the to the first client.

1 22. The method of claim 20 further comprising:  
2 receiving a request at the server computer to certify the first software-  
3 defined radio implemented at a second client computer; and  
4 transmitting the first ID data to the second client computer.

1 23. The method of claim 20 further comprising:  
2 receiving a request at the server computer to certify a second software-  
3 defined radio implemented at the first client computer; and  
4 transmitting second ID data corresponding to the second software-defined

5 radio to the second client computer.

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